

FOSSIL AND LIVING SHELLS FOUND IN LITTLE MUD LAKE, WESTMAN-  
LAND, AROOSTOOK COUNTY, MAINE.

BY OLOF O. NYLANDER.

This small lake is located in the forest near the south line of Westmanland Plantation, and is the headwater of Salmon Brook. This little lake contains some interesting shells not found in the county before. The deposit of dead shells (marl) is many feet in thickness, and is chiefly composed of *Pisidia*.

The living shells are extremely rare in the lake, and those collected came from small spring brooks at the north end of the lake. Dr. V. Sterki has kindly examined all the *Pisidia*. I do not know what the amateur collectors would do with these miserable little shells without his assistance. The fossils collected are as follows:

*Lymnæa desidiosa* Say. Common.

*Planorbis campanulatus* Say. Common.

*Planorbis bicarinatus* Say. A few young shells.

*Planorbis hirsutus* Gld. One specimen.

*Planorbis parvus* Say. Abundant.

*Ancylus parallelus* Hald. One specimen.

*Valvata* sp.? A variable species; some are nearly flat, others have the apex extremely elevated, a large percentage are decollate and the whorls are sometimes dislocated near the apex.

Mr. Bryant Walker has examined specimens and states: "They are extremely curious \* \* \* I have never seen any like them before. They are no doubt a form of *V. sincera* Say."

Dr. W. H. Dall gives me the following information: "They are exactly like the depauperate form of *V. lewisii* Currier. \* \* \* The distortions are familiar to me as found in marl deposits, the water becoming too much mineralized for the mollusks."

I made special efforts to obtain living specimens of this *Valvata* during the two trips to the lake, but not one could be found.

*Anodonta fragilis* Lam. Fragments.

*Sphærium sulcatum* Lam. A few valves.

*Sphærium rhomboideum* Say. Common.

*Musculium* sp.? probably *securis* Prime. Small.

*Pisidium variabile* Prime.

" *compressum* Prime.

" *affine* Sterki.

- Pisidium mainense* Sterki.  
 “ *ventricosum* Prime.  
 “ *costatum* Sterki.  
 “ *medianum* var. *minutum* Sterki.  
 “ *contortum* Prime.  
 “ *triangulare* Sterki.  
 “ *tenuissimum* Sterki.  
 “ *splendidulum* Sterki.  
 “ *splendidulum*, a new var.—Sterki.  
 “ *abditum*? or closely related to that species.

The following living shells were collected:

- Planorbis trivolvīs* Say. Two specimens.  
*Planorbis parvus* Say. Three specimens.  
*Anodonta fragilis* Lam. One specimen.  
*Musculium* sp.? A small form, probably a new species.  
*Pisidium variabile* Prime.

- “ *ventricosum* Prime.  
 “ *subrotundum* Sterki.  
 “ *mainense* Sterki.  
 “ *medianum* var. *minutum* Sterki.  
 “ *splendidulum* Sterki.  
 “ *splendidulum*, a new variety.—Sterki.

As additions to the Aroostook county shells, I might mention *Pisidium punctum* var. *simplex* Sterki. Dead water Caribou stream, Woodland. Rare and new to the county.

*Pisidium milium* Hald. is common in Gelot's Lake, New Sweden. Caribou, Me.

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#### REMARKS ON THE SUBFAMILIES HYRIINÆ AND UNIONINÆ.

BY L. S. FRIERSON.

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A few facts having important bearing on the classification of the *Naiades*, having come to notice, are herewith given to the readers of NAUTILUS.

Two species of the genus *Pseudodon* were obtained from Sowerby and Fulton, showing beak sculpture. *P. vondembuschiana* Lea has a somewhat doubly looped sculpture. The anterior loops curve upwards; the posterior are straighter, sloping backwards and downwards.

*P. walpolei* has a sculpture much like that of the *Cristarias*, being heavy bars, more or less parallel with the growth-lines.